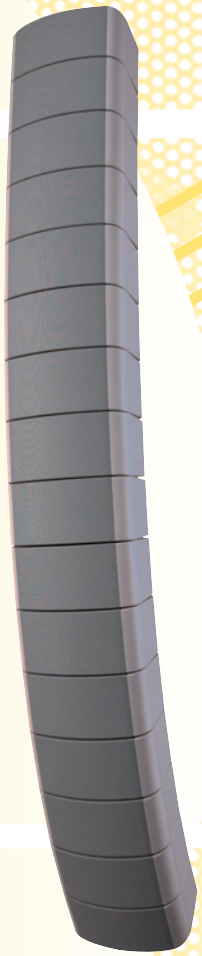
Powering your OmniLine®

(For general system preparation, see the OmniLine system preparation - preliminary guidance)



MARTIN AUDIO
LONDON

The Martin Experience

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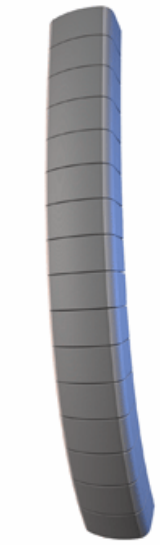
Powering your OmniLine[tm]

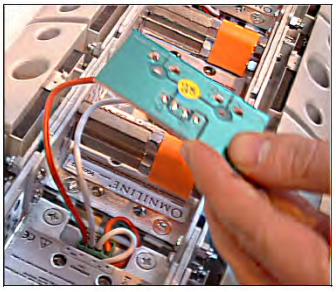
(For general system preparation, see the ***OmniLine system preparation - preliminary guidance***)



General

Your OmniLine[tm] is delivered in blocks of 4 modules ready wired in parallel. These four-module blocks may be separated into smaller blocks or individual modules, linked and paralleled to other blocks or modules using short link wires - or series connected to other blocks or modules using the series ***Connector pcb*** supplied with each four-module block (see illustration below).

The Connector pcb also provides an input termination.



Notes:

- White = -ve and Orange = +ve
- Upper and lower block connections are marked on the pcb.
- Route the wires between the pin clamps to avoid crushing them when the rear covers are replaced.

This allows the installer to build an array of appropriate length (we recommend 6% of each plane to be covered for good spectral balance) with electrical characteristics best suited to the Martin Audio power amplifier chosen.

Amplifier choices and limiter settings

The following chart shows Martin Audio power amplifier choices (indicated by dots) and Martin Audio DX1.5 or DX2 limiter settings (in red) to obtain optimal performance from the wide range of OmniLine array sizes and patch configurations possible.

Single channels, two channel and four channel configurations are shown. Multi-channel configurations are useful where zone control may be required.

To avoid amplifier clipping (which dumps excessive power into the HF arrays in the form of odd-order harmonics) it is best to choose the highest power amplifier in the range indicated. Note that power amplifiers must be set to the industry standard maximum voltage gain of 32dB (x40) with a correctly limited DX1.5 or DX2 system controller to comply with warranty conditions.

Amplifier	MA900	MA1.3s	MA1400	MA1.6s	MA4.8Q	MA6.8Q	MA2.8s	MA4.2s	MA5.2K	MA9.6K	MA12K	
8 ohms	280	350	425	430	625	650	1100	1300	1400	1500	2000	
4 ohms	450	650	700	840	1000	1200	1500	2300	2600	3000	4000	
2 ohms	675	1100	1050	1200	1200	1700	1700	2900	2800	4800	6000	
↓ OmniLine array ↓												
Indicates number of amp ch & impedance (per ch)												DX1.5 or DX2 long-term limiter threshold. *(32dB amp gain)*
Multiple modules connected in series (+) & parallel ((//)) (See patch sketches in "Powering your OmniLine")												*Attack = 16ms Decay = 256ms*
DX1.5 or DX2 controller must have 60Hz High Pass Filter. DX1.5 or DX2 controller must have correctly set long-term limiters and ClipLims (see right of chart →)												***Set DX1.5 or DX2 Clip Lim to 6dB***
Amplifiers must be set for 32dB (x40) voltage gain												
Single channel configuration												
1 module array 1ch 16 ohms	•	•	•	•	•							-2dBu (1ch)
2 module array 1ch 8 ohms (2//)	•	•	•	•	•							-2dBu (1ch)
4 module array 1ch 4 ohms (4//)	•	•	•	•	•							-2dBu (1ch)
6 module array 1ch 2.67 ohms (6//)		•	•	•	•	•						-2dBu (1ch)
6 module array 1ch 10.67 ohms ((3//)+(3//))							•	•	•	•		+4dBu (1ch)
8 module array 1ch 8 ohms ((4//)+(4//))							•	•	•	•		+4dBu (1ch)
12 module array 1ch 5.3 ohms ((6//)+(6//))							•	•	•	•		+4dBu (1ch)
16 module array 1ch 4 ohms ((8//)+(8//))							•	•	•	•		+4dBu (1ch)
24 module array 1ch 2.67 ohms ((6//)+(6//)//(6//)+(6//))									•	•	•	+4dBu (2ch)
Two channel configuration												
6 module array 2ch 5.34 ohms (2 x (3//))	•	•	•	•	•							-2dBu (1ch)
8 module array 2ch 4 ohms (2 x (4//))	•	•	•	•	•							-2dBu (1ch)
12 module array 2ch 2.67 ohms (2 x (6//))		•	•	•	•	•						-2dBu (2ch)
16 module array 2ch 8 ohms (4//+4//per ch)							•	•	•	•		+4dBu (1ch)
24 module array 2ch 5.3 ohms (6//+6//per ch)							•	•	•	•		+4dBu (1ch)
Four channel configuration												
16 module array 4ch 4 ohms (4 x (4//))					•							-2dBu (1ch)
24 module array 4ch 2.67 ohms (4 x (6//))					•	•						-2dBu (1ch)
Note: OmniLine modules are shipped in packs of 4												

(This chart is repeated full-size on the next page for easy reference)

ClipLim settings

Martin Audio loudspeakers are AES power rated. AES ratings allow for up to 6dB voltage (4 x power) instantaneous peaks. We therefore recommend that you set your DX1.5 or DX2 output channel ClipLims to +6dB.

Controller presets?

Note that we do not publish fixed presets for the OmniLine – apart from recommending a standard 60Hz high pass filter and the required limiter settings. The ***OmniLine Software*** – used to optimise the array shape – also generates the controller settings required for a flat in-situ system response or to meet your chosen house curve using the ***Optimise EQ*** function.

Amplifier	MA900	MA1.3s	MA1400	MA1.6s	MA4.8Q	MA6.8Q	MA2.8s	MA4.2s	MA5.2K	MA9.6K	MA12K	
8 ohms	280	350	425	430	625	650	1100	1300	1400	1500	2000	
4 ohms	450	650	700	840	1000	1200	1500	2300	2600	3000	4000	
2 ohms	675	1100	1050	1200	1200	1700	1700	2900	2800	4800	6000	
↓ OmniLine array ↓												
Indicates number of amp ch & impedance (per ch)												DX1.5 or DX2 long-term limiter threshold. *(32dB amp gain)*
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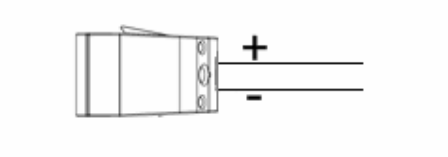
Single channel configuration												
1 module array 1ch 16 ohms	•	•	•	•	•							-2dBu (1ch)
2 module array 1ch 8 ohms (2//)	•	•	•	•	•							-2dBu (1ch)
4 module array 1ch 4 ohms (4//)	•	•	•	•	•							-2dBu (1ch)
6 module array 1ch 2.67 ohms (6//)		•	•	•	•	•						-2dBu (1ch)
6 module array 1ch 10.67 ohms ((3//)+(3//))							•	•	•	•		+4dBu (1ch)
8 module array 1ch 8 ohms ((4//)+(4//))							•	•	•	•		+4dBu (1ch)
12 module array 1ch 5.3 ohms ((6//)+(6//))							•	•	•	•		+4dBu (1ch)
16 module array 1ch 4 ohms ((8//)+(8//))							•	•	•	•		+4dBu (1ch)
24 module array 1ch 2.67 ohms ((6//)+(6//)//(6//)+(6//))									•	•	•	+4dBu (2ch)
Two channel configuration												
6 module array 2ch 5.34 ohms (2 x (3//))	•	•	•	•	•							-2dBu (1ch)
8 module array 2ch 4 ohms (2 x (4//))	•	•	•	•	•							-2dBu (1ch)
12 module array 2ch 2.67 ohms (2 x (6//))		•	•	•	•	•						-2dBu (2ch)
16 module array 2ch 8 ohms (4//+4//per ch)							•	•	•	•		+4dBu (1ch)
24 module array 2ch 5.3 ohms (6//+6//per ch)							•	•	•	•		+4dBu (1ch)
Four channel configuration												
16 module array 4ch 4 ohms (4 x (4//))					•							-2dBu (1ch)
24 module array 4ch 2.67 ohms (4 x (6//))					•	•						-2dBu (1ch)
Note: OmniLine modules are shipped in packs of 4												

OmniLine array patches

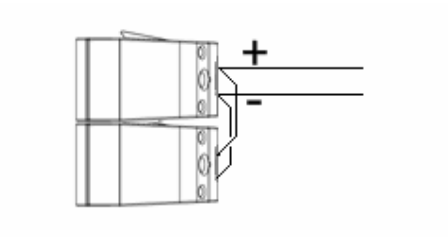
Single OmniLine modules are 16 ohm elements. Four modules are supplied in each carton. These four modules are connected in parallel to form a standard 4 ohm block but may be reconfigured, paralleled or series connected to provide a wide variety of series/parallel configurations chosen from the preceding chart.

Please note that if you don't understand series and parallel electrical configurations, you are strongly advised to enlist the advice of a profession sound system technician or experienced installer.

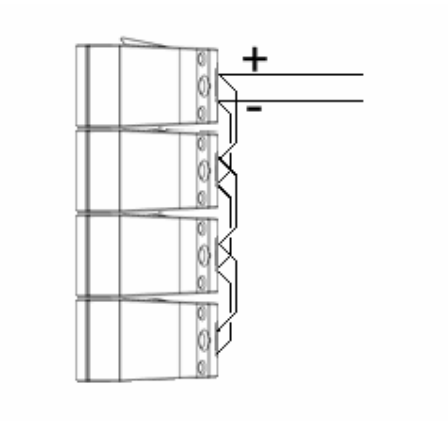
Single channel configurations



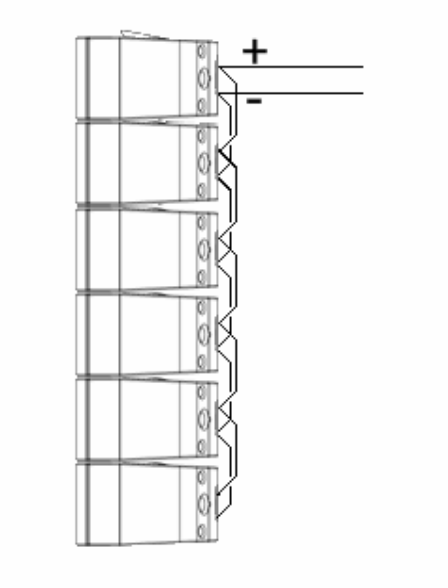
1 module array (16 ohms)



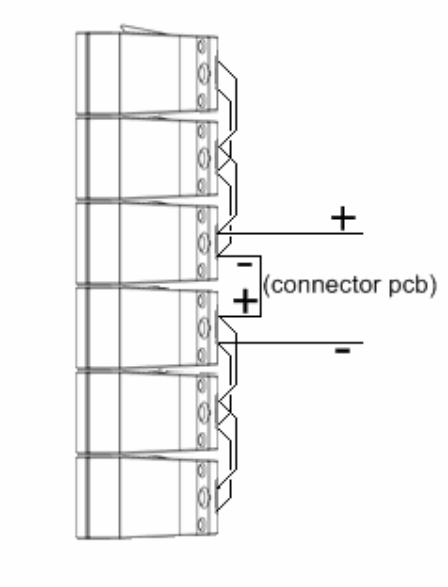
2 module array (8 ohms)



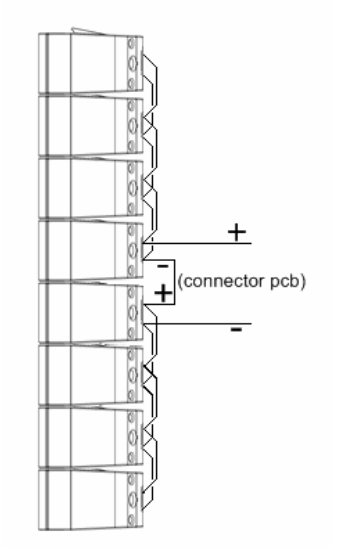
4 module array (4 ohms)



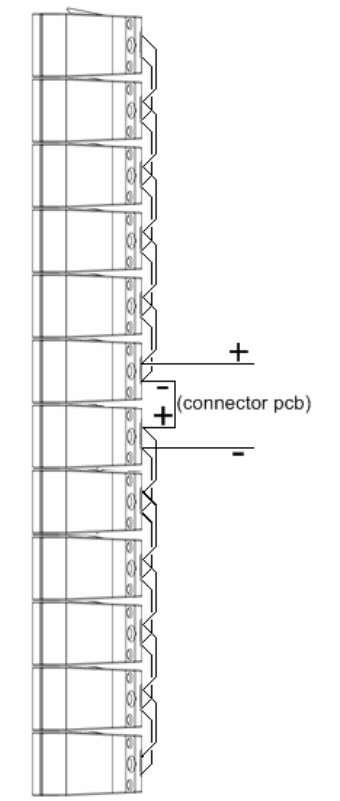
6 module array (2.67 ohms)



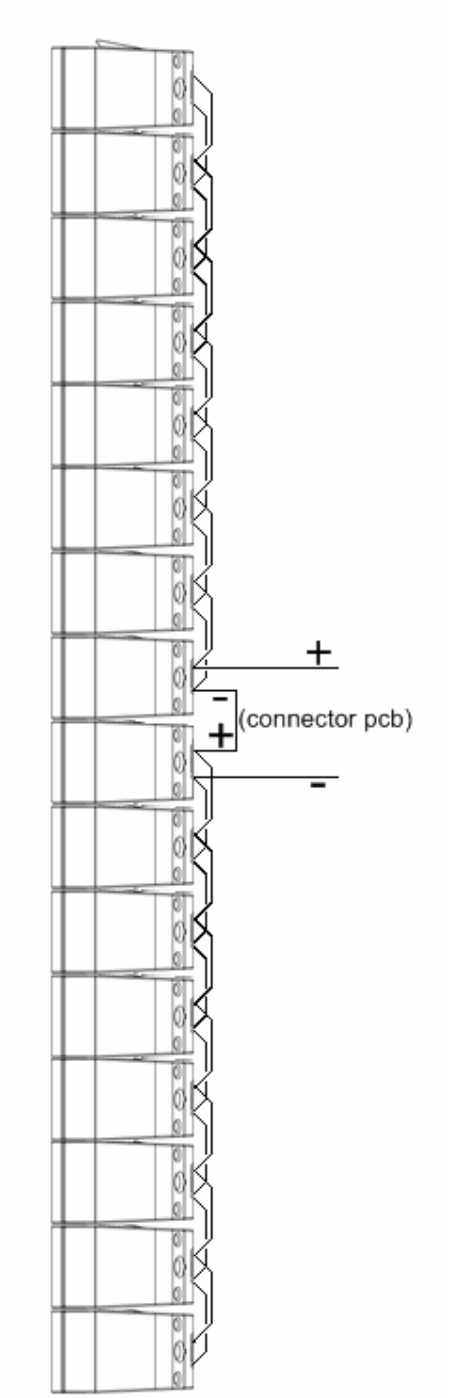
6 module array (10.67 ohms)



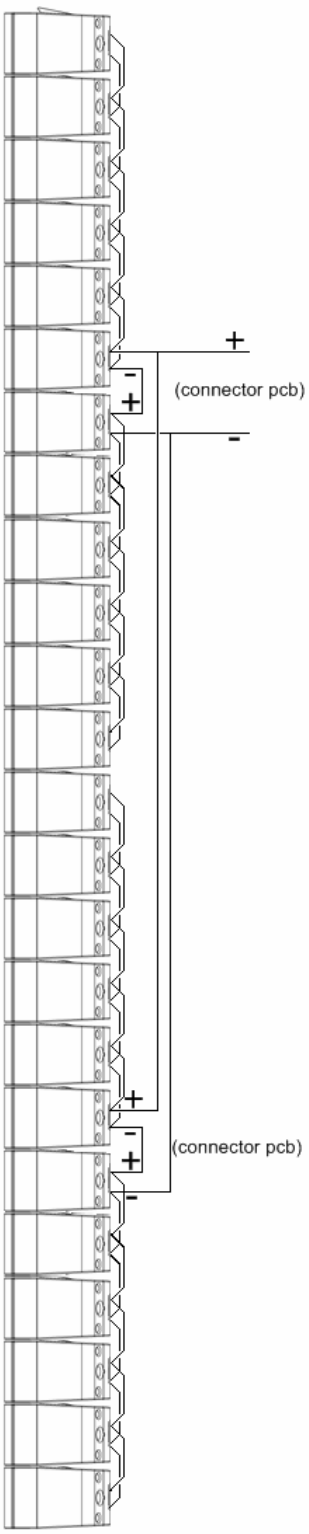
8 module array (8 ohms)



12 module array (5.3 ohms)

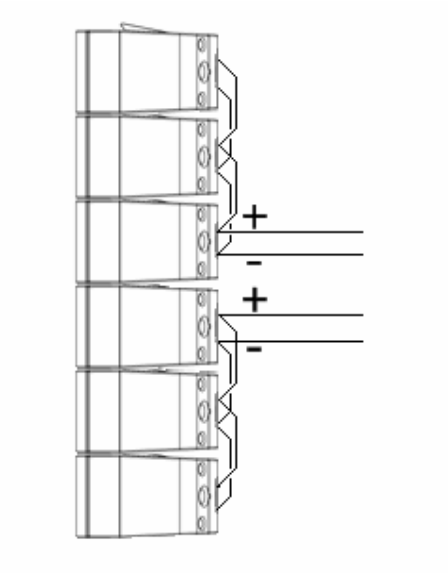


16 module array (4 ohms)

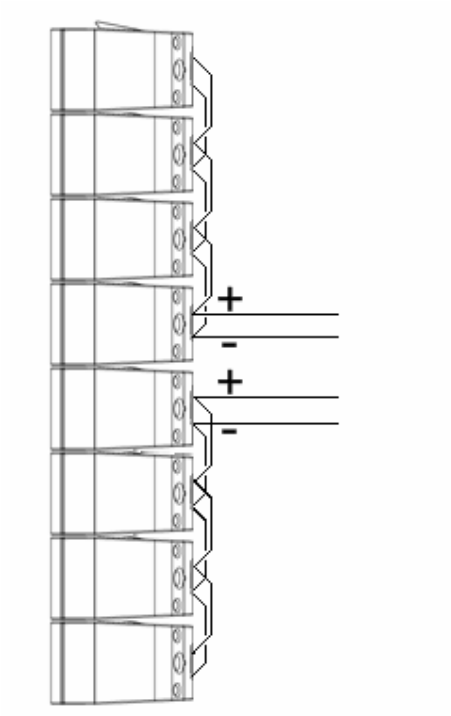


24 module array (2.67 ohms)

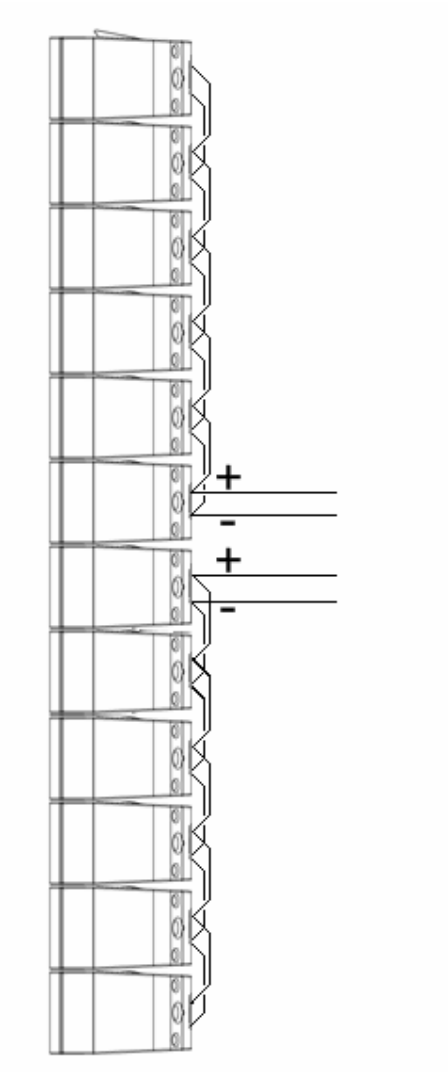
Two channel configurations



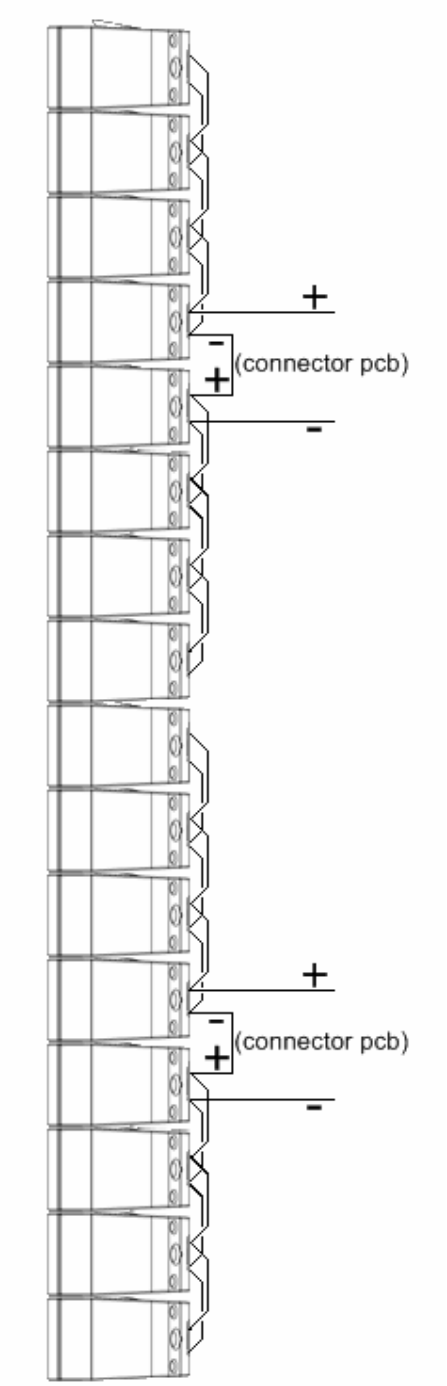
6 module array (5.34 ohms per channel)



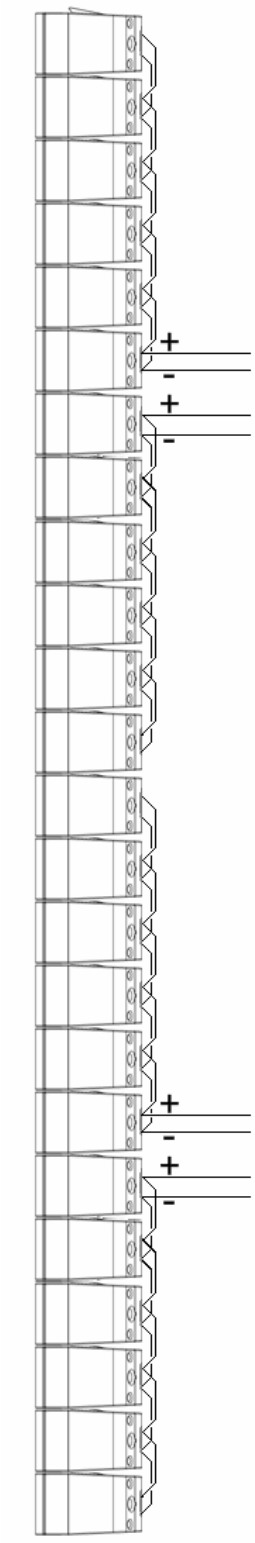
8 module array (4 ohms per channel)



12 module array (2.67 ohms per channel)

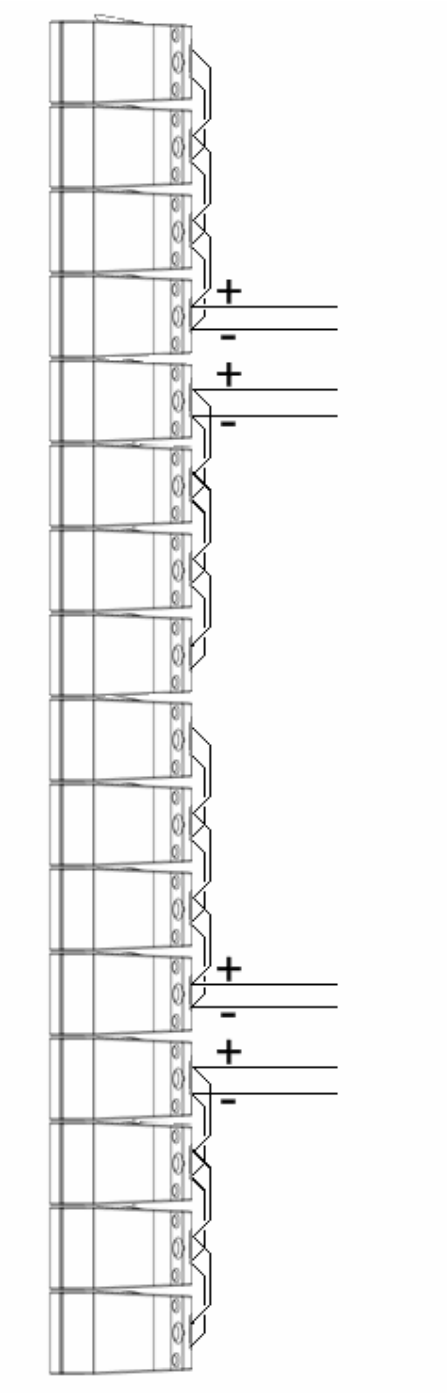


16 module array (8 ohms per channel)

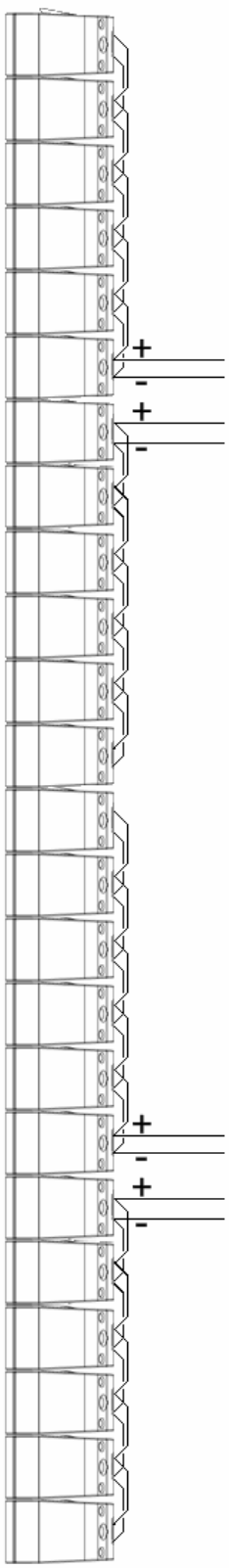


24 module array (5.3 ohms per channel)

Four channel configurations



16 module array (4 ohms per channel)



24 module array (2.67 ohms per channel)